

CCA

July 9, 1932.

Chief, Bureau of Biological Survey,  
Washington, D. C.

Dear Sir:

Transmitted herewith is our annual report covering administration of the Upper Mississippi River Wild Life and Fish Refuge during the fiscal year ended June 30, 1932. An extra carbon copy is also being furnished.

Very truly yours,

ech/gms

Ray C. Steele,  
Superintendent.



REPORT FOR THE FISCAL YEAR ENDED JUNE 30, 1932.  
Upper Mississippi River Wild Life and Fish Refuge  
Administration

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By Ray C. Steele, Superintendent.

Closed areas have been considerably enlarged and wherever possible, as a result of recent acquisitions, boundary lines have been straightened in an effort to better solidify such units. In view of the apparently inevitable development of a nine-foot channel on the upper Mississippi River, the same policy has been followed as obtained during the preceding fiscal year in that no stocking operations were carried on and only such planting operations as were of an annual character or would appear to be reasonably safe from any inundation resulting from the proposed channel improvement project.

POSTING

The subject of posting is treated first because it is felt that it continues to stand out as a problem of prime consideration in the administration of this Refuge and is deserving of all the emphasis to which it can be given. When the fact is considered that all features of administration of the Refuge are dependent in the final analysis upon proper location and identification of areas acquired the great importance which is attached to surveying and posting will be appreciated. No trespass case of whatever character, whether it be hunting, trapping, fishing, grazing, timber, brush or hay cutting or other types of invasion too varied to classify, can be successfully prosecuted unless it can be shown that the area where the offense occurred is a part of the Refuge and as such properly posted and identified. And if such invasions cannot be prosecuted it is obvious that they cannot be controlled.

Posting has been conducted and maintained not only of the closed areas but by the erection of shields where the main river and large meandered sloughs form natural boundaries and in the placing of fire warning signs along roads and trails and such other points as are visited by the public. The administrative force has gone as far as it can in the way of posting consistent with the extent to which acquired areas have been surveyed. However, the fact remains that the major portion of the lands acquired have not yet been surveyed, and in consequence the serious necessity for a concerted effort toward surveying and locating lands which have been purchased in order that such areas may be posted and placed under active administration is obvious.



### WILD FOWL CONDITIONS

The drought of the summer of 1931 continued into the following fall and consequently a very low stage of water prevailed during the hunting season. Lakes, sloughs and ponds which formerly were habitat for waterfowl were in many instances completely dried up. These factors, together with warm weather which prevailed retarding the migration, resulted in probably the poorest hunting season which the region of the Refuge had experienced in many years. However, late in November (after the hunting season had closed) a generous rainfall combined with the release of water impounded at the Hastings dam, situated about fifty miles above the upper end of the Refuge, raised the river stage to levels favorable to waterfowl, re-filled countless lakes and ponds, inundated bottomland meadows and woodland, and as a result rather considerable numbers of waterfowl, especially mallards, visited the Refuge in their southward migration. Waterfowl remained throughout the winter in substantial numbers in the area between Bellevue, Iowa and Savanna, Illinois. Considerable precipitation during late winter and spring raised and maintained the level of the river, sloughs and lakes to a stage that was almost ideal for waterfowl. As a consequence, more ducks used the Refuge area as a route of migration during the past spring than at any time recorded in recent years. The peak of the migration occurred about April 1 and the unusual concentration of ducks present (scaup and mallards predominating) was a matter of much public comment throughout the length of the Refuge zone.

### PATROL

With a serious scarcity of waterfowl being the general condition of affairs throughout the continent, the fall hunting season on the Refuge was met by a patrol force augmented to the fullest extent practicable with available funds. Every effort was made not only to preserve the sanctity of the closed areas but to keep to the minimum infractions of the Migratory Bird Treaty Act and provisions of state game laws affording protection to migratory wild fowl. Again in the spring, with such unusual numbers of waterfowl present, every effort was exerted to effect the most intensive patrol throughout the length of the Refuge, and as a result violations were kept to a minimum.

### TRAPPING

#### Public Trapping

The only public trapping of fur-bearing animals permitted on the Refuge was that of muskrats, and this only in the States of



Wisconsin and Minnesota. State seasons on the trapping of these animals in Illinois and Iowa had closed before the opening of the contemplated spring season on the Refuge so that no public trapping was permitted on portions of the Refuge in those States. The State season in Wisconsin as fixed by the legislature was from March 1 to April 10 and the Minnesota season, determined by the State Game and Fish Commissioner, was at first established as from March 22 to 31 and later extended to April 10. The open seasons on the Refuge for the public trapping of muskrats coincided with the State open seasons. A total of 343 permits were issued by the Superintendent to individuals allowing them to trap muskrats on open areas of the Refuge in Minnesota and Wisconsin. Permittees were required to observe certain restrictions in addition to those imposed by State law. Each permittee was limited to trapping in one County. A restriction was placed upon the size and type of trap which might be used. The possession or use of a muskrat spear, running trap lines between sunset and half an hour before sunrise, and cutting natural growth, except willows for trap stakes or drags, were prohibited. It was further required that each trap be visited at least once each day and that at the close of the season all traps be removed from the Refuge; that all birds and mammals, except muskrats, found alive in traps be immediately liberated; and that all such birds found dead or mortally injured be turned over to a Refuge official. Each permittee was required at the close of the trapping season to submit to the Superintendent a report of his total catch, together with the names and addresses of persons or firms who received the animals or pelts. These requirements enabled Refuge officials to keep a check on the operations of permittees, while failure to comply with any of the provisions would not only render a permittee subject to prosecution but would also be sufficient ground for refusal of a permit for the next trapping season. No charge was made for the Federal permit. In spite of unfavorable weather and ice conditions which prevailed up to the last few days of the trapping seasons, at least a fair catch was obtained. Prices paid for pelts were in line with low commodity prices in general; nevertheless, a temporary source of activity and revenue was afforded a number of unemployed. At the same time a liberal breeding stock of animals was preserved.

#### Under Reservations In Conveyances Of Land

The following aggregate amounts were collected as royalties to the United States as a result of trapping operations carried on by reservees under land purchase contracts:

Mink - - - -	\$22.00
Muskrat - - -	23.87
Total - -	\$45.87



### FIRE PREVENTION

When compared with the most serious fire hazard in the history of the Refuge which occurred during the spring of 1931, the Refuge administration considers itself exceedingly fortunate with respect to the extent of damage caused by fire during the past year. Following is a tabulation of the fires which occurred on the Refuge during the year:

Number of fires . . . . .	8
Total acreage burned over . . . .	382
Total acreage burned over compared with total acreage of Refuge . . . . .	0.3%
Average acreage of each fire. . .	47

#### Causes:

Unknown . . . . .	3
Hunters . . . . .	2
Railroads . . . . .	1
Campers . . . . .	1
Highway . . . . .	1

The relatively high stage of water prevailing in the river bottoms during the spring contributed in no small degree toward reducing the fire hazard. The auxiliary detection force of cooperative fire wardens was increased from 40 to 60 men. These cooperative fire wardens serve without appointment and without compensation, they being persons residing at strategic points along the Refuge area who are interested in the suppression of fires and who are alert to immediately report to the nearest Ranger or to the Winona office any outbreak of fire observed in the Refuge.

Fire fighting equipment was augmented by the purchase of additional numbers of hand fire pumps for distribution at advantageous points throughout the Refuge area. In addition a number of metal, weatherproof and waterproof houses measuring five feet in height by two feet square, in which hand fire fighting equipment was cached and where it would thus be available for emergency use, were procured and placed at strategic points. The equipment contained in each fire house consists of two hand pumps, two buckets, and two shovels. The door of the fire house is not locked but is fastened by a box car seal which provides ordinary security against those inspired by curiosity and at the same time permits of the fire house being opened by any one whether a Refuge employee or not when serious need therefor arises.



The 1- $\frac{1}{2}$  ton fire truck has been rendered more efficient in combatting fires by being equipped with a 120-gallon steel tank for use in transporting water to replenish the supply in the hand fire pumps.

The fact that fortunate circumstances assisted in preventing serious outbreaks of fire on the Refuge during the past year is no reason to justify any relaxation in precautionary measures for the future. The price of security is eternal vigilance, and this applies most forcibly in protection against fires.

#### EQUIPMENT

A suitable building was leased at the Winona headquarters for use as a garage, warehouse for storage of steel posts and metal shields for posting, storage of small boats, and other miscellaneous equipment and supplies including grain for birds, and as a workshop.

A floating boathouse 45' x 20' consisting of a steel catamaran with a wooden superstructure was constructed for housing the 28-foot sedan type cruiser used in fire protection and general inspection work. The boathouse is so constructed as to permit of the cruiser being driven in for shelter and protection, while steel truss work provides hoisting facilities to enable the cruiser to be raised out of the water inside the boathouse for the purpose of making repairs and for winter storage. A workshop 10' x 20' for the Engineman is provided in one end of the boathouse.

Two barges, 66' x 16' each, were obtained by transfer from the Army Engineers and were established as wharves at Winona, Minn. and McGregor, Iowa. McGregor, Iowa being situate almost in the geographical center of the Refuge provides an advantageous point in the taking on of fuel and supplies during the course of inspection trips.

As a measure of economy and to provide more efficient means of transportation of men and equipment, each Ranger has been provided with a one-half ton capacity panel-body delivery truck for his regular use.

#### PERSONNEL

An additional full-time Reservation Ranger was appointed with headquarters at McGregor, Iowa. He was assigned to the important Winneshiek and Harpers Ferry areas, in addition to having general charge of the Munn donation near McGregor. This assignment



made possible a rearrangement of adjoining Ranger districts, resulting in more equitable distribution of areas and more efficient patrol and administration in general.

Six additional Deputy Reservation Rangers were appointed. These employees, who are local residents, serve without compensation except when authorized to perform active duty, at which time they receive a salary of \$3.00 per day, the total however which they may receive during the fiscal year being not to exceed \$540.

#### PLANTINGS

As stated in the beginning, it is felt that any undertaking along this line should be made rather cautiously in view of the contemplated channel improvement project which when completed will result in the total inundation of considerable areas which during the major portion of the year are now dry land.

However, during the past spring sites were selected on upland portions of the Refuge in the vicinity of McGregor, Iowa which are at elevations well above any inundation by the river for the planting of trees and shrubs calculated to produce food for birds and game. About six hundred such trees indigenous to the region, including mulberry, wild plum, wild crab, American mountain ash, and high bush cranberry, were planted in these locations. The shrubs were planted in thicket formation to provide both cover and food for game.

Available areas, aggregating about one hundred acres, were selected during the past spring on which to plant corn, buckwheat, and other grains for use as food for birds and game. A portion of the crop is to be harvested to supply waterfowl feeding stations, while the remainder of the ripened grain will be left standing or in the shock as a ready source of food for game.

#### WINTER FEEDING

During the latter part of the winter the northern portion of the Refuge was heavily blanketed by snow, and as a consequence considerable numbers of pheasants, quail, and other upland birds faced a serious plight. To meet the situation, several Refuge employees were assigned to the construction of inexpensive wooden feed boxes of the hopper type having a capacity of about one-half bushel, which were distributed at advantageous points and kept supplied with a mixture of corn, oats, wheat, and grit. In establishing these feeding stations, crude shelters ten to fifteen feet in width were constructed of poles, branches, and marsh grass under



which the boxes were placed, thus obviating the danger of the feed boxes being covered by drifting snow. The birds almost immediately availed themselves of the feed and considerable numbers were thus sustained during the severe winter. The movement found sympathy in the local press, with the result that favorable publicity was given to the work and considerable public interest aroused. A sample feeding box of the type used on the Refuge was placed on exhibition in the Winona offices, where it was used as a pattern for the construction of similar boxes by local conservation organizations as well as by the Minnesota State Game Department, who became interested to the extent that they likewise undertook feeding operations not only in the general Refuge area but elsewhere in the State.

#### PRESERVATION OF PREHISTORIC MOUNDS

Just below the confluence of the Mississippi and Wisconsin Rivers is a Refuge area of about nine acres which contains more than one hundred prehistoric mounds. Many of these are effigy mounds, representing the eagle and the bear, which in Indian lore were symbolical of supremacy and strength, respectively. Work has been performed in thinning out underbrush and small scrubby trees on this area so as to render it more attractive and the mounds more distinct. Several sheep to be grazed on the area will keep the grass cut short and thus add to the prominence of this interesting and attractive feature of the Refuge.

#### POLLUTION

Little visible progress has been made toward the solution of this vexing problem which so adversely affects wild life in general and fishes and aquatic vegetation in particular. The matter has been the subject of serious discussions from time to time on the part of conservation organizations, but so far nothing like definite action has been taken by the States, the Twin Cities or other municipalities along the river with a view to providing means of disposition of sewage other than by discharging it into the Mississippi River.

#### NINE-FOOT CHANNEL

Hampered by court actions and with only very limited funds thus far made available for carrying out of the work, actual progress by the Army Engineers toward canalization of the upper river embracing the Refuge area has been slow. On December 5 a permanent injunction was entered in the United States District Court at Madison, Wis. restraining the War Department from conducting any further work, either in acquiring lands or constructing



locks and dams, in connection with the proposed dam at Alma, Wis. The proposed Alma dam was to have been the first of a series of low dams along the upper river to accomplish a nine-foot channel, and the court's order had a likewise restraining effect upon work in construction of other dams then contemplated. The petition for the injunction was instituted by a number of property owners, under the leadership of a railroad company, whose rights would have been affected by the project. It is understood that the injunction was granted on showing made by the petitioners that certain changes in plans of the War Department with respect to types of construction and height of dams were not in accordance with the plan submitted to and approved by Congress. The case was, however, appealed to the United States Circuit Court, where the decision of the District Court was reversed. It is understood that the time within which an appeal may be taken from the decision of the United States Circuit Court will expire on July 11, 1932, and that if no appeal is then entered the War Department will immediately proceed with acquisition of necessary land for and will start construction of the Alma dam. In the meantime surveys of sites for the other dams have been going on.

Obviously anything like a comprehensive report of activities under the channel improvement project has no place in this report as that function is, of course, one which has been committed to the U. S. Army Engineers for execution. However, the nine-foot channel has such a vital bearing upon the future of the Refuge that no discussion or report concerning the Refuge is complete without mention being made of it. Some differences of opinion continue to exist among local conservationists regarding the probable effects of the proposed navigation improvement project upon the wild life resources of the Refuge. The majority, however, seem to hold to the opinion that the advantages should result in outweighing the disadvantages and that in so far as waterfowl, fur-bearers and fishes are concerned, it is likely to prove decidedly beneficial.

#### SPECIAL USE PERMITS

A joint permit was issued by the Secretaries of Agriculture and Commerce allowing the use of certain lands of the Refuge in the construction of a highway to be used in connection with a toll bridge between Savanna, Ill. and Sabula, Iowa. A condition of the permit provides that all employees of the United States Government when on official duty shall be exempted from payment of tolls when using the proposed bridge and highway.

The following tabulation briefly sets forth various public uses made of certain Refuge areas under special use permits issued



by the Superintendent together with the returns derived therefrom:

8 cabins . . . . .	\$155.00
4 grazing permits. . . . .	208.00
4 brush cutting permits. . .	113.63
18 hay permits . . . . .	309.00
2 garden permits . . . . .	3.00
Total. . . . .	<u>\$788.63</u>

#### PROSECUTIONS

The following tabulation briefly sets forth violations of Refuge Act, Migratory Bird Treaty Act and State fish and game laws secured by Refuge employees during the year, together with the results obtained in such of these cases as have been terminated:

##### Refuge Act

Cases reported for prosecution . . . . .	11
Cases pending in Federal court . . . . .	4
Cases terminated . . . . .	7
By fines imposed . . . . .	2
By jail sentences. . . . .	4
Fine of \$50 suspended and on probation for one year. . . . .	1
Total fines. . . . .	\$60 (costs \$20.64)
Jail sentences: 2 of 5 days; 2 of 10 days and 1 of 3 months which was suspended.	

Of the above eleven cases, two were for carrying firearms in closed areas, six for trapping in closed areas, one for trapping raccoon, and two for unauthorized cutting of timber.

##### Treaty Act

Cases reported for prosecution . . . . .	7
Cases pending in Federal court . . . . .	9
Cases terminated in Federal courts . . . . .	1
(Sentenced to serve 30 days in jail - - - sentence suspended.)	



2 copies . . . . . \$722.00

of the following: . . . . .

### State Game and Fish Laws

Cases secured . . . . .	13
Cases pending in State courts . . . . .	1*
Cases terminated in State courts. . . . .	12
By dismissal. . . . .	none
By fines imposed. . . . .	11
By jail sentence. . . . .	1
Total fines . . . . .	\$545.00
Total costs . . . . .	58.45
Jail sentence . . . . .	1 - 60 days

\*Pending appeal (Fined \$50; costs \$25.55, in lower court)

In addition, five Refuge Act cases, secured prior to this fiscal year, were successfully terminated in Federal courts with the impositions of fines aggregating \$176.00. Of these five cases, two were for carrying firearms in closed areas, two for trapping in closed areas, and one for illegal fishing.

Six Treaty Act cases secured prior to this fiscal year were terminated in Federal courts, two of the cases being dismissed while the other four resulted in payments of fines aggregating \$215.00 plus costs amounting to \$28.45. In addition one of the defendants, for hunting in closed season, besides paying a \$100 fine was placed on probation for three years.

### PUBLIC RELATIONS

Besides numerous informal contacts made with state game and fish departments and local, state, and national conservation organizations, the Superintendent addressed seven meetings and conventions of state and national conservation organizations. Two of these conventions were outside the states in which the Refuge is situated, one being in Nebraska and one in Montana.

Friendly relations continue to exist between the Refuge organization and officials of game and fish departments of the four states in which the Refuge is situated. Such cordial relations and close cooperation continue to do much toward successfully enforcing both Federal and state laws throughout the Refuge area. Likewise, local sportsmen's organizations and the local press continue their friendly assistance, which helps considerably toward maintaining a favorable public attitude.



UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF BIOLOGICAL SURVEY

UPPER MISSISSIPPI RIVER WILD LIFE AND FISH REFUGE  
FEDERAL BUILDING, WINONA, MINNESOTA

ADDRESS REPLY TO SUPERINTENDENT  
UPPER MISSISSIPPI RIVER  
WILD LIFE AND FISH REFUGE  
AND REFER TO

RZ  
Fires.

JUN 18 1932

Memorandum to Mr. Steele.

Dear Mr. Steele:

Reference is made to your memorandum of June 15, 1932, requesting certain information in regards to our fire season for 1931-1932. I therefore submit the following data:

Number of fires.....	8
Acerage burned over.....	382
Percent of total acerage burned over.....	.3
Average fire.....(acres).	47

Causes:

Unknown.....	3
Hunters.....	2
Railroads.....	1
Campers.....	1
Highway.....	1

Cooperative Fire Wardens reported 50% of the fires.

There are now 60 Cooperative Fire Wardens on the Refuge. (Increase of 20)

Due to the more nearly normal water stages during the spring months the number of fires was greatly reduced, therefore any direct comparison with last year would be misleading. However there is one figure that can be used to show the functioning of the protection system. During the year of 1930-31 the average fire was 475 acres, this year it is 47 acres. Regardless of the



BUREAU OF BIOLOGICAL SURVEY

conditions of the river and water stages I believe this figure shows that fires are reported quickly and that action is taken within a short period of time.

Respectfully yours,

*Howard A. Miller*  
Howard A. Miller,  
Forester.



JUN 15 1932

MEMORANDUM FOR MR. MILLER

Dear Mr. Miller:

In order that we may incorporate the information in our annual report which will be due in another week or two, kindly furnish us with a statement relative to fires which occurred on the Refuge during the current fiscal year, i. e., the number of fires, the causes and the approximate acreage burned. Please also give us an up to date list of the total number of cooperative fire wardens which you now have.

Sincerely yours,

Ray C. Steele,  
Superintendent.

RCM:MM

FOLLOW UP MADE



June 21, 1932.

TOTAL AMOUNTS TAKEN IN FROM SPECIAL USE PERMITS FROM JULY 1, 1931  
TO JUNE 30, 1932, inc.

8	Cabin permits	\$155.00
4	Grazing permits	208.00
4	Brush and wood permits	113.63*
18	Hay Permits	309.00
2	Garden Permits	3.00

GRAND TOTAL - \$788.63

\* \$6.50 of this amt. was collected from  
Harry Schultz et al, trespass case, on which  
there was no permit issued.



PUBLIC TRAPPING PERMITS:

Total issued in State of Wisconsin 160

Total issued in State of Minnesota 183

TOTAL - 343

Reservations

muskiet \_\_\_\_\_ \$23.87

mink \_\_\_\_\_ 22. —

\$45.87